AMENDMENTS TO THE CLAIMS

Please amend the claims as indicated below.

Please delete claim 6 without prejudice.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A microscope comprising:

a light source including a control device configured to control an intensity of light emitted by the light source;

an illuminating optical system having a numerical aperture and being configured to illuminate a specimen;

an aperture device disposed in an illumination beam path and configured to modify the numerical aperture so as to change a resolution and contrast of the microscope;

a spectral correction device disposed in the illumination beam path and configured to change a spectral intensity distribution of the light emitted by the light source; and

a control unit configured to concurrently control the control device and the spectral correction device so that, upon a change in the numerical aperture, both a light flux through the illuminating optical system and a spectral intensity distribution of light directed onto the specimen remain substantially unchanged,

wherein the light source is powered electrically and wherein the control device is configured to modify electrical power delivered to the light source.

Claim 2 (original): The microscope as recited in claim 1 wherein the control device is configured to change the spectral intensity distribution of the light emitted by the light source.

Claim 3 (original): The microscope as recited in claim 1 further comprising a light-sensitive detector disposed in the illumination beam path and configured to detect at least a portion of the

light flux through the illuminating optical system and generate, as a function of the detected light flux, a signal that is usable for open-loop or closed-loop control of at least one the light source and/or of the spectral correction device.

Claim 4 (original): The microscope as claim 1 wherein the aperture device includes an aperture having a changeable diameter.

Claim 5 (previously presented): The microscope as recited claim 4 wherein the diameter of the aperture is changeable using a motor.

Claim 6 (cancelled)

Claim 7 (original): The microscope as recited in claim 1 wherein the spectral correction device includes a filter disposable in the illumination beam path, the filter having a plurality of working positions, a filter characteristic of the filter being a function of the respective working position.

Claim 8 (original): The microscope as recited in claim 7 wherein the filter is an absorption filter, the absorption filter having a respective thickness as each working position, the filter characteristic being a spectral transmittance of the filter.

Claim 9 (original): The microscope as recited in claim 7 wherein the filter is an interference filter, each working position corresponding to a respective position on a surface of the filter, the filter characteristic being a spectral interference.

Claim 10 (original): The microscope as recited in claim 7 wherein the filter is a reflection filter, each working position corresponding to a respective position on a surface of the filter, the filter characteristic being a spectral reflection capability.

Claim 11 (original): The microscope as recited in claim 7 wherein a spectral transmittance of the filter changes at least one of continuously and discontinuously.

Claim 12 (canceled)

Claim 13 (original): The microscope as recited in claim 7 wherein the spectral correction device is capable of changing a spectral intensity distribution of the light from the light source by a motion of the spectral correction device relative to the illumination beam path.

Claim 14 (original): The microscope as recited in claim 13 further comprising a motor configured to move the spectral correction device.

Claim 15 (original): The microscope as recited in claim 13 wherein the spectral correction device includes at least one of a linearly displaceable filter and a rotatable filter.

Claim 16 (original): The microscope as recited in claim 13 wherein respective intensities of the light emitted by the light source and respective working positions of the filter are predeterminable and storable as a function of respective settings of the aperture device.

Claim 17 (original): The microscope as recited in claim 1 wherein the spectral correction device is configured to influence the light intensity of at least one of a green and a red spectral region of the light from the light source.

Claim 18 (previously presented): The microscope as recited in claim 1 wherein the control unit includes a control computer configured to control the aperture device.

Claim 19 (previously presented): A method for modifying a light flux in a microscope including an electrically powered light source having a control device, an illuminating optical system for illuminating a specimen, an aperture device disposed in an illumination beam path of the

microscope and a spectral correction device disposed in the illumination beam path, the method comprising:

changing a numerical aperture of the illuminating optical system using the aperture device so as to change a resolution and contrast of the microscope; and

concurrently controlling the control device and the spectral correction device so that, upon a change in the numerical aperture, both a light flux through the illuminating optical system and a spectral intensity distribution of light directed onto the specimen remains substantially unchanged.

Claim 20 (previously presented): The method as recited in claim 19 further comprising:

detecting at least a portion of the light flux passing through the illuminating optical system; and

generating a signal based on the detecting, the signal being usable for at least one of open-loop or closed-loop control of the light source and for correcting a spectral intensity distribution of light emitted by the light source.

Claim 21 (previously presented): The method as recited in claim 19 wherein the controlling is performed by moving the spectral correction device relative to the illumination beam path.

Claim 22 (canceled)

Claim 23 (original): The method as recited in claim 21 wherein the moving of the spectral correction device is performed by at least one of displacing a first filter and rotating a second filter, the second filter including a circular disk.

Claim 24 (previously presented): The method as recited in claim 19 wherein the controlling includes moving the spectral correction device relative to the illumination beam path and further comprising:

providing, as a function of respective settings of the aperture device, respective values of the intensity of the light emitting by the light source and respective working positions of the spectral correction device, and

storing the provided values and working positions in a data storage unit.

Claim 25 (previously presented): The method as in claim 19 further comprising controlling the aperture device using a control computer, and wherein the controlling the control device and the spectral correction device is performed using the control computer.

Claim 26 (canceled)

Claim 27 (previously presented): The method as recited in claim 19 wherein the controlling includes moving the spectral correction device relative to the illumination beam path so as to change the spectral intensity distribution of the light from the light source.

Claim 28 (previously presented): A microscope comprising:

an electrically powered light source including a control device configured to control an intensity of light emitted by the light source;

an illuminating optical system having a numerical aperture and being configured to illuminate a specimen;

an aperture device disposed in an illumination beam path and configured to modify the numerical aperture;

a spectral correction device disposed in the illumination beam path and configured to change a spectral intensity distribution of the light emitted by the light source;

and

a control unit configured to concurrently control the control device and the spectral correction device so that, upon a change in the numerical aperture, both a light flux through the illuminating optical system and a spectral intensity distribution of light directed onto the specimen remain substantially unchanged, wherein the control device is controlled so as to modify the

electrical power delivered to the light source so as to modify the intensity of light emitted by the light source.

Claim 29 (previously presented): The microscope as recited in claim 28 further comprising a light-sensitive detector disposed in the illumination beam path and configured to detect at least a portion of the light flux through the illuminating optical system and generate, as a function of the detected light flux, a signal that is usable for open-loop or closed-loop control of at least one the light source and/or of the spectral correction device.

Claim 30 (previously presented): The microscope as recited in claim 28 wherein the spectral correction device includes a filter disposable in the illumination beam path, the filter having a plurality of working positions, a filter characteristic of the filter being a function of the respective working position.

Claim 31 (previously presented): The microscope as recited in claim 28 wherein respective intensities of the light emitted by the light source and respective working positions of the filter are predeterminable and storable as a function of respective settings of the aperture device.